

WHAT IS CLAIMED:

A process for manufacturing screens suitable for use in wet screening fibrous paper suspensions, in which the screens include at least one screen plate having a number of sorting apertures, the process comprising:

providing a number of fastening openings in the at least one screen plate; and
inserting profiled pieces into the fastening openings, wherein at least a portion of the profiled pieces are arranged to project beyond a screen surface.

2. The process in accordance with claim 1, wherein side surfaces of the profiled pieces are positioned essentially perpendicular to the screen surface.

3. The process in accordance with claim 1, wherein the projection of the profiled pieces beyond the screen surface is at least about 2 mm and no more than about 30 mm.

4. The process in accordance with claim 1, wherein the profiled pieces have a regular, polygon-shaped profile.

5. The process in accordance with claim 4, wherein the regular, polygon-shaped profiled piece is an octagon.

6. The process in accordance with claim 1, wherein the profiled pieces are made of highly wear-resistant material.

7. The process in accordance with claim 6, wherein the profiled pieces are made of a sintered metal alloy.

8. The process in accordance with claim 7, wherein a tungsten carbide powder is sintered to produce the profiled pieces.

9. The process in accordance with claim 1, wherein a cross-sectional area of the profiled pieces is between about 50 mm² and about 200 mm².

10. The process in accordance with claim 1, wherein the profiled pieces project beyond the screen plate at a height of between about 2 mm and about 15 mm.

11. The process in accordance with claim 1; wherein the fastening holes are circular with diameter that is smaller than a corner measurement of the profiled pieces.
12. The process in accordance with claim 11, wherein the inserting of the profiled pieces includes forced fitting the profiled pieces into the fastening holes.
13. The process in accordance with claim 1, wherein the fastening holes are provided to go through the at least one screen plate and to have a larger cross section on a side of the at least one screen plate at which the profiled pieces are inserted than on an opposite side of the at least one screen plate.
14. The process in accordance with claim 1, wherein the fastening holes are arranged in groups, and that the fastening holes of each group are arranged in a line.
15. The process in accordance with claim 14, wherein edges of adjacent fastening holes in a group are spaced only a short distance from one another.
16. The process in accordance with claim 14, wherein the lines of the fastening holes are straight.
17. The process in accordance with claim 14 wherein the lines of the fastening holes are curved.
18. The process in accordance with claim 14, wherein the lines of the fastening holes have a zigzag shape.
19. The process in accordance with claim 1, wherein the fastening holes are positioned separately on the at least one screen plate and are spaced out at a distance of at least about 50 mm.
20. The process in accordance with claim 1, further comprising mounting ridges onto the at least one screen plate.
21. The process in accordance with claim 1, wherein the sorting apertures have a circular cross section with a diameter between about 1 mm and about 30 mm.

22. The process in accordance with claim 1, wherein the at least one screen plate is made from a high-strength metal alloy.

23. A screen suitable for use in wet screening fibrous paper suspensions, comprising:

at least one screen plate having a plurality of sorting apertures and a plurality of fastening openings; and

a plurality of profiled pieces structured and arranged to be insertable into said fastening openings, and such that, when fully inserted into said fastening openings, at least a portion of the profiled pieces are arranged to project beyond a screen surface.

24. The screen in accordance with claim 23, wherein said plurality of profiled pieces comprise polygonal shapes.

25. The screen in accordance with claim 24, wherein said polygonal shapes are octagons.

26. The screen in accordance with claim 23, wherein side surfaces of said plurality of profiled pieces are positioned essentially perpendicular to the screen surface.

27. The screen in accordance with claim 23, wherein the projection of said plurality of profiled pieces beyond said screen surface is at least about 2 mm and no more than about 30 mm.

28. The screen in accordance with claim 23, wherein said plurality of profiled pieces are made of highly wear-resistant material.

29. The screen in accordance with claim 28, wherein said plurality of profiled pieces are made of a sintered metal alloy.

30. The screen in accordance with claim 29, wherein a tungsten carbide powder is sintered to produce said plurality of profiled pieces.

31. The screen in accordance with claim 23, wherein a cross-sectional area of said plurality of profiled pieces is between about 50 mm² and about 200 mm².

32. The screen in accordance with claim 23, wherein said plurality of profiled pieces project beyond the screen plate at a height of between about 2 mm and about 15 mm.

33. The screen in accordance with claim 23, wherein said fastening holes are circular with diameter that is smaller than a corner measurement of said plurality of profiled pieces.

34. The screen in accordance with claim 33, wherein the inserting of said plurality of profiled pieces includes forced fitting the profiled pieces into said fastening holes.

35. The screen in accordance with claim 23, wherein the fastening holes are provided to go through said at least one screen plate and to have a larger cross section on a side of said at least one screen plate at which the profiled pieces are inserted than on an opposite side of said at least one screen plate.

36. The screen in accordance with claim 23, wherein said fastening holes are arranged in groups, and that said fastening holes of each group are arranged in a line.

37. The screen in accordance with claim 36, wherein edges of adjacent fastening holes in a group are spaced only a short distance from one another.

38. The screen in accordance with claim 36, wherein said lines of said fastening holes are straight.

39. The screen in accordance with claim 36, wherein said lines of said fastening holes are curved.

40. The screen in accordance with claim 36, wherein said lines of said fastening holes have a zigzag shape.

41. The screen in accordance with claim 23, wherein said fastening holes are positioned separately on said at least one screen plate and are spaced out at a distance of at least about 50 mm.
42. The screen in accordance with claim 23, further comprising ridges mounted onto said at least one screen plate.
43. The screen in accordance with claim 23, wherein said sorting apertures have a circular cross section with a diameter between about 1 mm and about 30 mm.
44. The screen in accordance with claim 23, wherein said at least one screen plate is made from a high-strength metal alloy.